

SITE SAFETY PLAN
(for use by E & E personnel only)

A. GENERAL INFORMATION

Project Name: Taylor Way Drums TDD No.: T10-9007-016
Project Manager: Jon Bagby Pan No.: TWA-0645-SAA
Site Location: 216 Taylor Way, Tacoma, WA
Prepared by: Justin Freed Date Prepared: August 15, 1990
Approval by: *Jon Bagby* Date Approved: 9/13/90
Site Safety Officer Review: _____ Date Reviewed: _____
Scope/Objective of Work: Access basement of warehouse, collect samples (water, soil, sludge) and assess removal potential.

Proposed Dates of Field Activities: August 17, 1990

Background Info: Reported abandoned drums (approximately 34) in basement of superlawn plastic warehouse. Drums approx. 20 yrs. old, rusted, unlabelled, supposedly empty. One drum with a label industrial wood preservative. All other potential chemical hazards unknown.

Hazard Summary: Approx. 32 drums located in basement of warehouse. Most or all are empty. Floor is dirt with debris scattered. Hazards include slip/trip fall, explosion, splash, overhead, confined space and lack of clear line of vision.

Overall Chemical Hazard: moderate

Overall Physical Hazard: moderate

B. SITE/WASTE CHARACTERISTICS

Waste Type(s): Liquid, sludge, contaminated soil, vapors

Chemical Hazards: Methylethyl ketone, pentachlorophenol, corrosives, unknown.

Physical Hazards: Overhead, confined spaces, trip/fall, splash, cut, puncture. Building is old with several rafters collapsed. Must watch for structural failure.

Site History/Description and Unusual Features: Formerly owned by Justis Cedar Homes (now Lyndal Cedar Homes).

Locations of Chemicals/Wastes: In basement of Superlawn Plastics Warehouse

Estimated Volume of Chemicals/Wastes: 34 drums; volume per drum unknown.

Site Currently in Operation: Yes, but not for wood treatment.

C. HAZARD EVALUATION

List of Tasks:

Task 1: Initial entry to assess atmospheric conditions

Task 2: Sampling of drums, soil, standing water

Task 3: Photo documentation

Task 4:

Task 5:

Task 6:

Physical Hazard Evaluation:

Task 1: Trip/fall, overhead, slip

Task 2: Trip/fall, overhead, slip, cut, puncture, splash

Task 3: Trip/fall, overhead, slip

Task 4:

Task 5:

Task 6:

Summary of Chemical Hazard Evaluation:

<u>Compound</u>	<u>PEL/TWA</u>	<u>Route of Exposure</u>	<u>Acute Symptoms</u>	<u>Odor Threshold</u>	<u>Odor Description</u>
Penta	PEL .04 ppm	Ingestion, ocular absorption, inhalation	Headache, naus, dizzy, burning, sensation		very weak, pugnant when hot
Arsenic	PEL .3 ppm	ingestion, absorption inhalation	Dizzy, fatigue,		None
Copper	PEL .38 ppm	ingestion, contact inhalation	Nausea, sneezing		None
Methylethyl Ketone	PEL 200 ppm	Ingestion, absorption inhalation	Headache, diziness, nausea, CNS, Depressiant	16 ppm	pleasant, sweet

Note: A Hazard Evaluation Sheet for each major known contaminant is attached.

D. SITE SAFETY WORK PLAN

Site Control:

Perimeter identified: yes

Work Areas Designated: yes

Site secured: yes

Zone(s) of Contamination Identified: yes

Personnel Protection (TLD badges required for all field personnel):

Anticipated Level of Protection (cross-reference task numbers to Section C):

	<u>A</u>	<u>B</u>	<u>C</u>	<u>Level of Protection</u> <u>D</u>
Task 1		X		
Task 2		X		
Task 3		X		
Task 4				
Task 5				
Task 6				

Modification: All tasks performed in Level B protection with sijal suits. Line of sight anticipated to be a problem, therefore 2-way radio's will be employed to maintain constant contact with the site safety officer.

Action Levels for Work Zone:

Organic Vapors: >1ppm above background - use Level C
>5ppm above background - use Level B

Oxygen: <19.5% - use Level B
>25% - exit site

Combustible Gases: >10% LEL - continuous monitoring
>25% LEL - exit site

Dust: >5 mg/m3 - use Level C

Radiation: >0.1mR/hr - continuous monitoring
>2mR/hr - exit site and conduct stay-time calculations

Air Monitoring (daily calibration unless otherwise noted):

<u>Contaminant of Interest</u>	<u>Type of Sample</u> <u>(area, personal)</u>	<u>Monitoring</u> <u>Equipment</u>	<u>Frequency of</u> <u>Sampling</u>
Penta	area	OVA/HUN	Continuous
MEK	area	OVA/HNU	Continuous
Explosive	area	Explosimeter	Continuous
Oxygen	area	Oxygen meter	Continuous
HCN gas/H ₂ S	personal	Monotox	Continuous
Radiation	personal	Mini Rad	Continuous

Decontamination Solutions and Procedures for Equipment, Sampling Gear, etc.: Where possible, disposable sampling equipment will be used. When necessary, the decontamination procedure will include a consecutive series of the following washes:

Personnel protective gear and sampling equipment will be disposable. If wet decon is necessary, use water and alconox solution. Tyvek will be worn over sijal suits for contamination avoidance purposes. Tyvek and any towels used to wipe sijal suits will be double bagged and disposed of in a municipal dumpster.

Personnel Decon Protocol:

Decon Solution Monitoring Procedures: Disposable protective suits (Tyvek and Sijal) Tyvek and wipes and other disposables will be double bagged

Special Site Equipment, Facilities, or Procedures: N/A

Site Entry Procedures and Special Considerations:

Work Limitations: Due to site locations, limited line-of-site observation can be maintained. Therefore, 2-way radio comms will be used if necessary; one with SSL and other with observer who will be sampler. (will be modified if line-of-site can be established).

General Spill Control: Because all work will be in Level B, 15 min. rest periods will be used as often as necessary

Investigation-Derived Material Disposal: Will be left on site until results from lab tests are returned. All disposables double bagged and disposed.

Sample Handling Procedures Including Protective Wear: All sampling will be performed in Level B.

Team Member

Jon Bagby
Justin Freed
Noah Myer
Kenney Louie

Responsibility

Team Leader
Site Safety Coordinator
Chemical Engineer
TAT Technician

E. EMERGENCY INFORMATION
(Use supplemental sheets, if necessary)

LOCAL RESOURCES
(Obtain a local telephone book from your hotel, if possible)

Ambulance: 911

Hospital Emergency Room: 911

Police: 911

Fire Department: 911

Poison Control Center: 526-2121

Agency Contact: Thor Cutler, 442-1196

Site Contact: Don Richards, 383-5877

SITE RESOURCES

Site Emergency Evacuation Alarm Method: Sound vehicle horn, series of 8 rapid short blasts!

Water Supply Source: Unknown

Telephone Location, Number: 383-5877

Cellular Phone Number:

Radio: 2-way Radio comms between SSC and observe (with sampler).

Other:

EMERGENCY CONTACTS

- | | | |
|---|----------------|-------------------------|
| 1. E & E Emergency Response Center 24-hour Hot Line | (716) 684-8940 | |
| Ecology and Environment, Inc., Corporate Safety Director | | |
| Paul Jonmaire | (716) 684-8060 | (office) |
| | (b) (6) | (home) |
| 2. MEDTOX (Dr. Raymond Harbison) | (501) 221-0465 | or (904) 462-3277, 3281 |
| | (501) 370-8263 | (24 hours) |
| 3. William Carberry (Regional Safety Coordinator) | (b) (6) | (home) |
| | (206) 624-9537 | (office) |
| 4. Regional Manager, David Buecker | (b) (6) | (home) |
| FITOM, Andrew Haferty | | (home) |
| TATL, William Carberry | | (home) |
| ARCS 9/10 Manager, | | |
| Assistant FITOM, Kathy Bahnick | | (home) |
| ATATL, Richard Brooks | | (home) |
| Assistant ARCS Manager, Mark Wells | | (home) |

MEDTOX HOTLINE

1. 24-hour answering service: (501) 370-8263

What to report:

State: "This is an emergency!"

Your name, region, and site.

Telephone number to reach you.

Your location.

Name of person injured or exposed.

Nature of emergency.

Action taken.

2. A toxicologist, (Dr. Raymond Harbison or associate) will contact you. Repeat the information given to the answering service.
3. If a toxicologist does not return your call within 15 minutes, call the following persons in order until contact is made:
 - a. **24 hour hotline - (716) 684-8940**
 - b. Corporate Safety Director - Paul Jonmaire - home # (716) 655-1260
 - c. Assistant Corp. Safety Officer - Steven Sherman - home # (716) 688-0084

EMERGENCY ROUTES

(NOTE: Field team must know route(s) prior to start of work)

Directions to Hospital (include map): Tacoma General Hospital - North ion Tylor Way. Head west (turn left) on E. 11th St. Turn north (right) on So. "K" St. Hospital is located on 315th So. "K" ST.

Emergency Egress Routes to Exit Site: Primary egress will be up stairs to empty point. Two souures of atlernate egrass routes are available: 1) through door way, door is nno longer present 2) hole in wall that is large enough for person to pass through

F. PERSONNEL PROTECTIVE GEAR

Level A:

SCBA
Spare Air Tanks
Cascade System
Encapsulated Suit
Surgical Gloves
Protective Outer Gloves
(Type: >)
Neoprene Safety Boots
Protective Booties
Hard Hat
Radiation Dosimeter Badge

Level B:

SCBA	X
Spare Air Tanks	X
Cascade System	X
Manifold System	
Neoprene Safety Boots	
Protective Coveralls	X
(Type: Sijal)	X
Surgical Gloves	X
Protective Outer Gloves	X
(Type: Solvex)	X
Protective Booties	X
Hard Hat	X
Radiation Dosimeter Badge	X
Rain Suit	
Butyl Apron	

Level C:

Ultra-Twin APR
Powered APR
Back Mount APR
Cartridges
(Type: >)
Five Min. Escape Mask
Protective Coveralls
(Type: >)
Surgical Gloves
Protective Outer Gloves
(Type: >)
Neoprene Safety Boots
Protective Booties
Hard Hat with Face Shield
Radiation Dosimeter Badge
Rain Suit
Butyl Apron

Level D:

Ultra-Twin APR (Available)
Cartridges
(Type: >)
Five Min. Escape Mask
Work Coveralls
Surgical Gloves
Protective Outer Gloves
(Type: >)
Neoprene Safety Boots
Protective Booties
Hard Hat with Face Shield
Radiation Dosimeter Badge
Rain Suit
Steel-toe Boots
Safety Glasses

SAFETY MEETING

Site Name:

Date:

Time:

TDD No. :

NAME (Printed)

Signature

Meeting Conducted By:

Safety Officer:

Team Leader:

Ecology and Environment, Inc.
Hazard Evaluation of Chemicals
Region V - Chicago

recycled paper

NO: / /

NO: _____

SYN : Metallic arsenic, Arsenic 75, Organic Arsenic
CAS NO: 7440-38-2 .. FORMULA: As
DOT CLASS: 1558/POISON

CHEMICAL NAME: Arsenic

CHEMICAL PROPERTIES

St: Solid Boil Pt: 1135.0 °F Ioniz Pot: --- FI Pt: ---
M: 74.9 Melt Pt: 1500.8 °F Vap Press: 1.0 mmHg UFL: ---
r: 5.72 Frz Pt: --- Odor Thr: --- UFL: ---
: none

INPAT/REACT: heat, acids, oxidizing agents, halogens, air sensitive
SOLUBILITY : water-insoluble; nitric acid

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 0.06 ppm ✓ PEL (OSHA): 0.03 ppm (0.10 mg/m³) WC 6/29
STEL: --- IDLH: ---

TOX PROPERTIES :
Route: INHAL :
DERMAL :
ORAL : LD50: 750 mg/kg/55Y
CARCIN : human positive
MUTAGEN : exper
REPRO TOX: exper
AQUATIC :
OTHER TOX: TARGET ORGANS: liver, kidneys, skin, lung, lymphat sys
ROUTES OF EXP: Ingestion, Eye (Ocular), Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

WEARERS : APR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm
EQUIP TYPE : GAC-H or AP3 (RACAL)
PROTECTIVE CLOTHING: Coveralls: Tyvek Gloves: Butyl, Neoprene
PRECAUTIONS : OSHA Regulated Carcinogen

FIRST AID

INHALATION: move to fresh air, give O2/CPK if nec. SEEK MEDICAL ATTENTION
SKIN : Remove cont. clothes, flush w/water 15 min. SEEK MEDICAL ATTENTION
EYES : Rinse mouth w/water, treat for shock, SEEK MEDICAL ATTENTION

SYMPTOMS

: dermatitis, nose/throat irritation, mild bronchitis, headache, dizzy, fatigue, pale/blue face, diff breath, abd pain, diarrhea, trembling of arms/legs, convulsions, pulmonary edema
IC: loss of appetite, cramps, nausea, constipation, diarrhea, liver damage, blood, kidney & nervous syst. disturb, poss. skin cancer, lymphatic system affected.

DISPOSAL, FIRE, SPILLS (see attached sheet)

OSHA: P FIRE: 11,13 LEAKS & SPILLS: 4,6,7,9
HAZARDOUS PRODUCTS: arsenic oxides

REFERENCES CONSULTED

OSHA Pocket Guide, ACGIH TLV Booklet, RTECS
REFERENCES: Sigma-Aldrich, Handbook of Poisoning, Emerg Resp Guide, OSHA

HAZARD CLASSIFICATION: Non-metal/Metalloid

LAST REVISION DATE:

5/16/90

Ecology and Environment, Inc.
Hazard Evaluation of Chemicals
Region V - Chicago

DATE : / /

REV NO: _____

CHEMICAL NAME: Copper

SYN : Cupric, Cuprous

CAS NO: 7440-50-8

FORMULA: Cu

DOT CLASS:

CHEMICAL PROPERTIES

Phys St: Solid Boil Pt: 4652.6°F Ioniz Pot: — FI Pt: —
Mol Wt: 63.55 Melt Pt: 1981.4°F Vap Press: — LFL: —
Sp Gr: 8.92 Frz Pt: — Odor Thr: — UFL: —
Odor: none
INCOMPAT/REACT: acetylene gas, magnesium metal, halogens, strong acids, oxidizing agents
SOLUBILITY: concn acids; slowly attacked by dil acids

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 0.38 ppm PEL (OSHA): 0.38 ppm
STEL: — IDLH: —
OTHER PROPERTIES: tumorigenic in rats, oral data: gastro effects, repro data: fetotoxic
Tox Data: INHAL: —
DERMAL: —
ORAL: hum TULo: 120 ug/kg
CARCIN: —
MUTAGEN: —
REPRO TOX: rat TULo: 152 ug/kg
AQUATIC: sensitive
OTHER TOX: TARGET ORGANS: Skin, Resp Sys, Liver, Incr Risk of Wilson's Disease, Kidney
ROUTES OF EXP: Ingestion, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

RESPIRATORS: AFR: dusty/windy condit or known high concent or >1ppm but <5ppm; SCBA >5ppm
CARTRIDGE TYPE: GMC-H, AP3 (RACAL)
PROTECTIVE CLOTHING: Coverall: Tyvek Gloves: Butyl
SPEC PRECAUTIONS: Flammable in finely divided form. Also occurs as radioisotopes

FIRST AID

INHALATION: move to fresh air, CPR if nec, SEEK MEDICAL ATTENTION
EYE/SKIN: flush w/water, wash skin w/soap, SEEK MEDICAL ATTENTION
INGESTION: SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

ACUTE: skin, eyes, sneezing, nausea

CHRONIC: respiratory system, lungs, liver, kidneys

DISPOSAL, FIRE, SPILLS (see attached sheet)

DISPOSAL: F

FIRE: 13.

LEAKS & SPILLS: 7

DECOMPOSITION PRODUCTS: toxic fumes

REFERENCES CONSULTED

NIOSH/OSHA Pocket Guide, ACGIH TLV Booklet, Aldrich, RTECS

OTHER REFERENCES: Poison Handbook

CHEMICAL CLASSIFICATION: Metal

LAST REVISION DATE:

10/19/89

5/16/90

Hazard Evaluation of Chemicals
Region V - Chicago

environment and ecology

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DATE : / /

JOB NO: _____

SYN : FCP, Dioxide 7, Penta

CAS NO: 87-86-5

FORMULA: C₆Cl₅OH

DOT CLASS: 2020

CHEMICAL NAME: Pentachlorophenol

CHEMICAL PROPERTIES

Phys St: Solid Boil Pt: 590.00°F Ionz Pot: -- FI Pt: --
Mol Wt: 266.35 Melt Pt: 370.40°F Vap Press: 0.0002 mmHg LFL: --
Sp Gr: 1.98 Frz Pt: 370.00°F Odor Thr: -- UFL: --
Odor : very weak, pungent when hot
INCOMPAT/REACT: strong oxidizers/bases, acid chlorides, acid anhydrides
SOLUBILITY : insoluble-water; alcohol, ether, benzene

JB 5/16/90

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 0.04 ppm SKIN PEL (OSHA): 0.04 ppm SKIN
STEL: -- IDLH: 13.79 ppm

OTHER PROPERTIES : HIGHLY TOXIC. IRRITANT. POSSIBLE TERATOGEN.

Tox Data: INHAL : human LD₅₀: 29mg/kg

DERMAL : -

ORAL : rat LD₅₀: 50mg/kg

CARCIN : YES

MUTAGEN : -

REPRO TOX: teratogen, fetotoxic

AQUATIC : 5ppm/3hr/trout/lethal/fresh water

OTHER TOX: TARGET ORGANS: CVS, Resp Sys, Eye, Liver, Kidney, Skin, CNC

ROUTES OF EXP: Ingestion, Eye(Ocular), Dermal Absorption, Skin Contact, Inhalation

JB 5/16/90

PERSONAL PROTECTIVE MEASURES

RESPIRATORS : APR: dusty/windy condit or known high concentr. or >1 but <5ppm; SCBA: >5ppm
RIDGE TYPE : GMC-H or A-3 (RACAL)
PROTECTIVE CLOTHING: Coverall: Tyvek Gloves: Neoprene, Viton
SPEC PRECAUTIONS : High concentrations in air are dangerous to exposed skin, eyes, and mucous membranes

FIRST AID

INHALATION: move to fresh air, artif resp if nec, SEEK MEDICAL ATTENTION
EYE/SKIN : remove contamntd cloth, flush w/H₂O at least 15min, wash skin w/soap & water, SEEK MEDICAL ATTENTION
INGESTION : give water, induce vomiting, SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

ACUTE : irritation of eyes/resp tract/nose, bronchitis, profuse sweating, headache, weakness, lost appetite, naus/vomit, short breath, chest pain, dizzy, bluish face/lips, burning in mouth/throat, skin burns
CHRONIC: acne-like skin rash, liver and/or lung damage, contact dermatitis, may cause congenital malformation in the fetus.

DISPOSAL, FIRE, SPILLS (see attached sheet)

DISPOSAL: A

FIRE: 3,7

LEAKS & SPILLS: 6,7,8,9

DECOMPOSITION PRODUCTS: HCl, CO, CO₂

REFERENCES CONSULTED

NIOSH/OSHA Pocket Guide, Merck Index, Chris(vol. III), ACGIH TLV Booklet
OTHER REFERENCES: NIOSH guides, Sigma-Aldrich, Poison Handbook, 1st Aid for Chem-Accid.

CHEMICAL CLASSIFICATION: Phenol

LAST REVISION DATE:

04/19789

5/16/90

Hazard Evaluation of Chemicals
Region V - Chicago

memorandum for Chicago

added peroxide

DATE : / /

JOB NO: _____

SYN : MEK, 2-Butanone

CAS NO: 78-93-3

DOT CLASS: 1193-FL LIQ CL3

FORMULA: CH₃COCH₂CH₃

CHEMICAL NAME: Methyl Ethyl Ketone

CHEMICAL PROPERTIES

Phys St: Liquid

Boil Pt: 175.30°F

Ioniz Pot: 9.53ev ✓

FI Pt: 20.00°F

Mol Wt: 72.11

Melt Pt: -124.60°F

Vap Press: 70.00 mmHg

LFL: 1.00%

Sp Gr: 0.80

Fz Pt: -123.30°F

Odor Thr: 16.00ppm ✓

UFL: 11.50%

Odor: like acetone, pleasant, pungent, sweet, sharp

INCOMPAT/REACT: sulfuric acid, nitric acid, aliphatic amines, oxidizing agents, bases, strong reducing agents

SOLUBILITY: water soluble

JB 5/16/90

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 200.00 ppm ✓

PEL (OSHA): 200.00 ppm ✓

STEL: 300.00 ppm ✓

IDLH: 3000.00 ppm

5/16/90

OTHER PROPERTIES:

Tox Data: INHAL: human Tc10: 100 ppm/5min

DERMAL: skin rbt LD50: 13 gm/kg

ORAL: rat LD50: 2737 mg/kg

CARCIN: -

MUTAGEN: -

REPRO TOX: exper teratogen

AQUATIC: 5640mg/1/48hr/bluegill/TLm/fresh water

OTHER TOX: TARGET ORGANS: CNS, Lungs

ROUTES OF EXP: Ingestion, Eye(Ocular), Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

RESPIRATORS: AFR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm

RIDGE TYPE: GMC-H or AP3 (RACAL)

PROTECTIVE CLOTHING: Coverall: Tyvek Gloves: Butyl

SPEC PRECAUTIONS:

FIRST AID

INHALATION: move to fresh air, CPR if nec, SEEK MEDICAL ATTENTION

EYE/SKIN: flush w/water at least 15min, SEEK MEDICAL ATTENTION

INGESTION: DO NOT INDUCE VOMITING, SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

ACUTE: eye burns, vapor: irritates eyes/nose/throat, headache, dizziness, weakness, nausea, CNS depressant, neuropathy

CHRONIC: dermatitis

DISPOSAL, FIRE, SPILLS (see attached sheet)

DISPOSAL: D

FIRE: 3,7

LEAKS & SPILLS: 1,3,4,6,9

DECOMPOSITION PRODUCTS: CO, CO₂

REFERENCES CONSULTED

Chris(vol. III), ACGIH TLV Booklet, RTECS

OTHER REFERENCES: Sigma-Aldrich, Poison Handbook

CHEMICAL CLASSIFICATION: Ketone, Aliphatic & Alicyclic

LAST REVISION DATE:

~~5/10/89~~

5/16/90



ecology and environment, inc.

101 YESLER WAY, SEATTLE, WASHINGTON, 98104, TEL. 206/624-9537

International Specialists in the Environment

September 20, 1990

Carl G. Kitz

Environmental Protection Agency
1200 Sixth Avenue, HW-113
Seattle, WA 98101

Ref: TDD T10-9007-016

Dear Carl:

Enclosed please find the site safety plan for Taylor Way Drums site assessment. If you have any questions, please contact Jon Bagby.

Sincerely,

William L. Carberry
TAT Leader

JB/thl

Enclosure